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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/985,838	11/06/2001	Yoshimi Tomita	054791-5004	4404

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EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/985,838	<b>Applicant(s)</b> TOMITA, YOSHIMI	
	<b>Examiner</b> Jorge L Ortiz-Criado	<b>Art Unit</b> 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-14 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,6,8,10,12 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,7 and 9 is/are rejected.
- 7) ☒ Claim(s) 11 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 2,4,6,8,10,12 and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/01/2004.

### *Claim Rejections - 35 USC § 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1,5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka. U.S. Patent No. 5,553,044 in combination with Kawamura et al. U.S. Patent No. 6,424,614 and further in view of Satoh et al. U.S. patent no. 5,428,597.

Regarding claim 1, Tanaka discloses a multi-layered disc (See Abstract) comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane

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(See col. 4, lines 18-67; col. Figs. 2,3), the control data including a control data being recorded as a PEP (Phase Encoded Part) signal (See Tanaka col. 4, lines 18-67; col. Figs. 2,3)

Tanaka does not expressly disclose that the control data being recorded by a CAV (Constant Angular Velocity) method over a plurality of tracks in said control data recording area, and said control data recording area in each of said recording layers being disposed such that said control data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line.

However these features are well known in the art as evidenced by Kawamura et al and Satoh et al.

Kawamura et al. discloses a multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane and being recorded by a CAV (Constant Angular Velocity) or CLV (Constant Linear Velocity) method over a plurality of tracks in a control data recording area (See col. 4, lines 25-65; Figs. 3-4)

Satoh et al. discloses multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane, and said control data recording area in each of said recording layers being disposed such that said control data recording area of one of said

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recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line (See col. 4, line 66 to col. 5, line 11, Figs. 6 and 7; col. 6, lines 6-36, Figs. 10)

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to record the control data in each of said recording layers such that said control data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line because by doing so would prevent the recording/reproducing light beam not to be focused on two or more control data recording areas simultaneously avoiding cross-talks and the desired control information of the desired layer can be accurately detected, as suggested by Satoh et al. and by a well known and well established recording method of CAV obtaining a simplicity recording/reproduction of the recorded area, as suggested by Kawamura et al.

Regarding claim 5, the combination of Tanaka with Kawamura et al. and Satoh et al. shows comprising a second control data recording area for recording a second control data to control the operation of recording and/or reproducing the information data in said recording layers (See Tanaka col. 4, lines 18-67; col. Figs. 2,3; SFP)

Regarding claim 7, Tanaka discloses a multi-layered disc reproducing apparatus for reproducing information data recorded on a multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording the information data

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and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane, (See col. 4, lines 18-67; col.; col. 9, lines 28-49; Figs. 2,3,4), the control data including a control data being recorded as a PEP (Phase Encoded Part) signal (See Tanaka col. 4, lines 18-67; col. Figs. 2,3) said multi-layered disc reproducing apparatus comprising:

a detection signal outputting device for outputting a detection signal, which carries the control data in said control data record area, on the basis of a reflected light obtained by an irradiation of a reading light onto said control data recording area (See col. 28-49; Fig. 4, ref# 17,18);

a control data reproducing device for reproducing the control data on the basis of the detection signal outputted from said detection signal outputting device; and an information data reproduction controlling device for reproducing the information data recorded in said information data recording area on the basis of the reproduced control data (See col. 28-49; Fig. 4, ref# 10)

Tanaka does not disclose that the control data being recorded by a CAV method over a plurality of tracks in said control data recording area, said control data recording area in each of said recording layers being disposed such that said control data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line.

However these features are well known in the art as evidenced by Kawamura et al and Satoh et al.

Kawamura et al. discloses a multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane and being recorded by a CAV (Constant Angular Velocity) or CLV (Constant Linear Velocity) method over a plurality of tracks in said control data recording area (See col. 4, lines 25-65; Figs. 3-4)

Satoh et al. discloses multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane, and said control data recording area in each of said recording layers being disposed such that said control data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line (See col. 4, line 66 to col. 5, line 11, Figs. 6 and 7; col. 6, lines 6-36, Figs. 10)

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to record the control data in each of said recording layers such that said control data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line because by doing so would prevent the recording/reproducing light beam not to be focused on two or more control data recording areas simultaneously avoiding cross-talks and the desired control

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information of the desired layer can be accurately detected, as suggested by Satoh et al. and by a well known and well established recording method of CAV obtaining a simplicity recording/reproduction of the recorded area, as suggested by Kawamura et al.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka. U.S. Patent No. 5,553,044 in combination with Kawamura et al. U.S. Patent No. 6,424,614 and Satoh et al. U.S. patent no. 5,428,597 and further in view of Yamaguchi et al.

The combination of Tanaka with Kawamura et al. and Satoh et al. discloses all the limitations based on claim 7, as outlined above. The combination shows extracting a control data signal based on the control data from the detection signal and a control data decoder for generating the control data by the control data signal extracted by said. (See Tanaka col. 28-49; Fig. 4, ref# 10)

But, the combination does not show a low pass filter for extracting a control data signal.

However this feature is well known in the art as evidenced by Yamaguchi et al., which discloses a recording/reproducing apparatus including a decoder for extracting the data signal from the detection signal and a low pass filter.

Therefore it would, have been obvious to one with ordinary skill in the art at the time of the invention to include a low pass filter for extracting a control data signal based on the control data from the detection signal in order to Remove Noise components included on the reproduced signal to be decoded, as suggested by Yamaguchi et al.



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4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. U.S. Patent Numbers 5,136,560 to Hangai et al.; 5,608,717 to Ito et al; 6,195,325 to Okanishi, which discloses a recording disk including an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane the control data being recorded by a well established well known CAV (Constant Angular Velocity) method over a plurality of tracks in said control data recording area.

b. WO 98/58368 to Xie, which discloses a single-sided or a double-sided disk with either a single-layer or multi-layer including a control data recording area in each of the recording layers being disposed such that said control data recording area of one of the recording layers is not superimposed with said control data recording area of another of the recording layers in the direction of the normal line

***Allowable Subject Matter***

5. Claims 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record in combination as outlined above teaches the control data reproducing

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apparatus comprising a low pass filter for extracting a control data signal based on the control data from the detection signal; and a control data decoder for generating the control data by the control data signal extracted by said low pass filter, but the prior art of record fails to teach or suggest either alone or in combination, specifically wherein said low pass filter has a cut-off frequency, which is a double frequency of a repetition frequency of a longest pit carrying the control data, and an attenuation characteristic, which attenuates the detection signal from a standard level of said low pass filter by the cut-off frequency, as in claimed in claim 11; and wherein said low pass filter has an attenuation characteristic which attenuates more than 40 dB from a standard level of said low pass filter at a repetition frequency of a SFP (Standard Formatted Part) signal having a longest pit, as claimed in claim 13, if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Response to Arguments*

6. Applicant's arguments filed 09/29/2004 have been fully considered but they are not persuasive.

In regard to claims 1,5 and 7 applicants argue that none of the cited (Tanaka, Kawamura and Satoh references, discloses the combination of the control data being recorded as PEP signal and also being recorded by the CAV method. Also argues that the embodiment claimed involve a combination of CAV method and PEP signal. Applicant further argues that the advantage of the claimed invention is not disclosed by any of the cited references and is not obvious because the

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object of the claimed invention is different from the cited references. Applicant also argues that there is no motivation to include the combination of CAV and PEP.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Tanaka discloses a multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane, **the control data including a control data being recorded as a PEP** (Phase Encoded Part) signal, which allows reproduction of the control data **without errors** because there are **No track grooves** in the area **as being recorded as PEP**, hence No tracking necessary (i.e. tracking servo open),

Kawamura et al. discloses a multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane and **being recorded by a well known and well established CAV (Constant Angular Velocity)** over a plurality of tracks in said control

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data recording area and rather the using the also well known and well established method CLV (Constant Linear Velocity), Kawamura et al. suggested the method of CAV because of simplicity.

And it would have been obvious to one with ordinary skill in the art at the time of the invention to record the control data in each of said recording layers such that said control data recording area of one of said recording layers **is not superimposed with said control data** recording area of another of said recording layers in the direction of the normal line because by doing so would prevent the recording/reproducing light beam not to be focused on two or more control data recording areas simultaneously avoiding cross-talks and the desired control information of the desired layer can be accurately detected, this feature is suggested by Satoh et al. and by a well known and well established recording Method of CAV obtaining a simplicity recording/reproduction of the recorded area, as suggested by Kawamura et al.

In response to applicant's argument that the advantage of the claimed invention is not disclosed by any of the cited references and is not obvious because the object of the claimed invention is different from the cited references, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

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combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

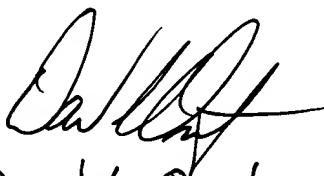
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm), Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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David L. Ometz  
Primary Examiner